



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/753,069

01/08/2004

Clifford J. Weber

00322.0008.CPUS01

5428

22930 7590 08/04/2009
HOWREY LLP - East
C/O IP DOCKETING DEPARTMENT
2941 FAIRVIEW PARK DR, SUITE 200
FALLS CHURCH, VA 22042-2924

EXAMINER

PERRY, LINDA C

ART UNIT

PAPER NUMBER

3695

MAIL DATE

DELIVERY MODE

08/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/753,069	Applicant(s) WEBER ET AL.	
	Examiner LINDA PERRY	Art Unit 3695	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 17-28, 33-44, 47, 74-83 and 87-99 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-59 and 95-97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 1-13,17-28,33-44,47-55,60- 61, 74-83, 87-94 and 98-99,.

DETAILED ACTION

1. This Office Action is responsive to amendments filed 5/26/2009 to Application No. 10753069 filed 1/8/2004. Claims 14-16, 29-32, 45-46, 84-86, and 100-110 had previously been canceled. Claims 1-3, 12, 13, 17-19, 33-35, 47 -50, 54-61, 74-76, 87-90, 94-95, and 97-99 are amended. The independent claims are claims 1, 17, 33, 47, 48, 54, 55, 56, 57, 59, 60, 61, 62, 74, 87, 88, 94, 95, 97, 98, and 99.

Election/Restriction

2. This application contains claims drawn to an invention nonelected with traverse in the reply filed on 08/15/2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

Claims 1- 13, 17-28, 33-44, 48-49, 55, 60, 61, 74-83, 88-89, 94, and 98-99 as amended are now drawn to a method and system for creating a proxy portfolio for a fund, or claims directed to the group II previously restricted out, and without traverse, in Applicants' response of 8/15/2008 to Examiner's requirement for election/restriction of 7/21/2008..

Claims 47 with 50-53 and 87 with 90-93 as amended are now directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are drawn to a method for determining a set of traded fund

Art Unit: 3695

sensitivity coefficients for a secondary market traded fund, wherein the fund sensitivity coefficients do not reveal the fund assets.

Since applicant has received an action on the merits 10/31/2008 for the originally presented invention, method, system for permitting efficient and data storage device storing software to permit trading of shares of a fund, and a method for calculating the estimated value of a fund, this invention has also been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 47, 50-53, 87, and 90-93 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim 54 as amended is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are drawn to a method for creating a set of risk factors for a secondary market traded fund without revealing the traded fund assets

Since applicant has received an action on the merits 10/31/2008 for the originally presented invention, method, system for permitting efficient and data storage device storing software to permit trading of shares of a fund, and a method for calculating the estimated value of a fund, this invention has also been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 54 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Finally, the only claims related to the original group I are claims 56-59 and 95-97. Of those claims 56-58 and 95-96 were directed to calculating an estimated value of an

Art Unit: 3695

exchange-traded fund (ETF), and claims 59 and 97 to deriving an estimated value of a **fund**. Now claims 56-58 deal with calculating an estimated value of a **fund**, 95-96 deal with calculating an estimated value of an **exchange-traded fund (ETF)**, and claim 59 deals with deriving an estimated value of a **secondary market traded fund** (except that the antecedent is improper) and claim 97 with deriving an estimated value of a **fund**. Examine has assumed that there is support for these amendments in the application as originally filed.

For completeness, Examiner quotes the relevant parts of the 8/15/2008 Election/Restriction and notes that Applicants elected Group I.

“Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-13, 47, 75-83, 50-53, 17-28, 33-44, 48-49, 52, 54, 55, 56, 57-58, 59, 60, 61, 74, 87, 88-89, 92-93, 94, 95-96, 97, and 98, drawn to methods and a system for permitting and a data storage device storing software to permit trading of shares of a fund, and to a fund and a method for calculating the estimated value of a fund, classified in class 705, subclass 37.
- II. Claims 14, 29, 32, 45, 84 drawn to methods and system for creating and a data storage device storing software to create a proxy portfolio for a fund, classified in class 705, subclass 36R.

Art Unit: 3695

- III. Claims 15, 16, 30, 31, 46, 85, 86, and 109-110, drawn to methods and a system for creating and a data storage device storing software for creating a hedging portfolio for a fund, classified in class 705, subclass 36R.
- IV. Claims 62-66, 67-72, and 100-103, and 104-108, drawn to methods of and to methods comprising selecting a second set of securities that substantially tracks a first set of securities, classified in class 705, subclass 36R.
- V. Claim 73, a derivative, based on a fund whose estimated value is calculated based on the value of a created proxy portfolio, classified in class 705, subclass 36R”

Response to Amendment

3. Examiner notes that Applicants' remarks appear to ask for use of a 5/26/09 amendment for the claims and 5/26/09 arguments refer to 2/26/09 arguments which apply to a 2/26/09 set of claims which are very different from the current claims. Furthermore, Applicants also refer to a supplemental amendment of 5/04/09 which was accompanied by yet another set of claims. It is standard to put all the material into an amendment and to make the materials clear. Here arguments and affidavits referring to three separate sets of claims are very confused.

Art Unit: 3695

4. Applicants argue that Dembo does not apply because it does not cite a fund. It does cite a portfolio, and Applicants' specification uses a broad definition which clearly includes a portfolio: "the term "fund" as used herein includes at least the following): **any type of investment instrument** including, for example, shares of mutual funds, unit investment trusts (UITs), closed-end funds, grantor trusts, hedge funds, any investment company, or any other type of collective investment".

Applicants further argue a current amendment; what Applicants actually used is different from what is cited in the remarks, **"the (proxy/hedging) portfolio does not reveal the traded fund assets and the identifies of the traded fund assets are not disclosed to an investor who purchases shares of the traded fund"** .

From claim 56, 57, 59, 95, and 97: "fund assets are not disclosed to an investor who trades shares of the [traded, exchange traded] fund"

In one case, Examiner shows why the method of replication uses only of the risk coefficients and performance, and never requires the composition of the target, and otherwise the argument is moot given new grounds of rejection, for example Gibbons.

Response to Arguments of 2/26/09

5. Examiner notes that Applicants begin, in their description of the claimed invention by declaring "...but he securities underlying the AMETF can be kept secret. Such secrecy is an established practice for managers of actively managed funds in order to prevent "front running" and "free riding" by other investors". Thus the amended in limitation "and the identities of the traded fund assets are not disclosed to an investor

Art Unit: 3695

who trades shares of the traded fund” is given as a known feature as Applicants here declare, while in the 5/26/09 amendment, as already seen, Applicants declare that this is a distinguishing feature of the invention.

Applicants arguments have been fully considered and are not persuasive.

6. Applicants then refer to Charles Baker’s declaration, which cites “3. I began working for Alpha Strategies, LLC in 1999, doing product development and marketing of new ETF products”. Thus the ETF has been marketed before the 3/27/2000 date of the invention, and not by the Assignee.

Applicants arguments have been fully considered and are not persuasive.

7. Mr. Baker refers (7) to the concept of an “actively managed ETF” attracting significant attention according to a **2001** SEC concept release as proof of “well-recognized industry demand” for **technology to allow AMETFs**. Right away, the dates are mismatched, and it is the **technology** which is needed. Yet Applicants wish to claim entirely different things from the technology to allow AMETFs, namely, a fund (claim 56) and a method for calculating an estimated value (claim 57) and a method comprising trading shares (claim 59) of a traded fund and of an exchange traded fund (claim 95, 97), all without revealing the (relevant) fund assets.

Applicants' arguments name “system and methods that allow trading of AMETFs” but only the need for technology is vouched for in Mr. Baker’s statement.

In addition, the named SEC statement cites that during 2000, the number of **ETFs** increased from 30 to 80. The concept release is recognizing that **systems and methods for trading ETFS already existed, and also is directed to ETFs**, registered

Art Unit: 3695

under the Investment Company Act of 1940 as open-end funds or UITs which do not sell or redeem their shares at NAV; whereas, Applicants' application is about (claim 56) a fund, a traded fund (claim 59) and an exchange traded fund (claim 95), where Applicants clearly distinguish in their Application specification that the **AMETF is not the same thing as an ETF** at all. From pages 12-13:

In accordance with the invention, AMETFs may be organized as investment companies (or fund companies), which are companies that issue securities and whose primary business is investment. In a preferred embodiment, AMETFs may be open-ended, and thus issue shares that 25 may be redeemed by the investment company for their NAV. While AMFs are currently not traded on secondary markets, the structures, systems, and methods described below can allow exchange trading. While most ETFs are open-end management investment companies, some ETFs are organized as UITs, and a similar organizational structure may be used for AMETFs. In an alternative embodiment, AMETFs may be organized as closed-end companies, which issue shares that are not redeemable by the fund company at all times, but rather are traded primarily on secondary markets. There are a number of ways in which the distribution structure of AMETF shares may be organized.

Then Mr. Baker cites (8) WSJ May 2000 which again argues away from Applicants' point. The WSJ article makes clear that exchange traded funds exist, that actively managed funds exist, and that mutual-fund companies are exploring ways to use the exchange-traded fund format to allow stock mutual funds headed by professional stock-pickers to trade like stocks throughout the day. As explained by MPEP §2141 III (A), a combination of old elements, where in the combination each element merely would have performed the same function as it did separately, and where one of ordinary skill in the art would have recognized that the results of the combination were predictable, is to be rejected the combination as obvious. The WSJ article of 5/16/2000 demonstrates that combining the two was contemplated and that one capable of reading the WSJ would have recognized that the components were old

Art Unit: 3695

and well-known would have worked together predictably. And again, ETFs are discussed in the WSJ.

Clearly, what Mr. Baker discusses is not relevant to the claims at hand.

The 5/16/00 Street article also adds that exchange-traded funds exist and have been growing in number and actively managed funds exist and asks whether they will be combined. Again, articles cited show the obviousness of the claims

Applicants arguments have been fully considered and are not persuasive.

8. Mr. Baker cites (11) that holdings of actively managed funds are not disclosed to the investor daily, but **are disclosed less frequently**. Applicants, in contrast, choose claim that "identities of the traded fund assets are not disclosed to an investor who trades shares of the traded fund:" (which means, are **never** disclosed) and Applications never specify an **actively managed** fund at all in the claims.

Clearly, what Mr. Baker discusses is not relevant to the claims at hand.

Applicants arguments have been fully considered and are not persuasive.

9 Similar comments to Examiner's 7 apply to the WSJ article of 1/11/2005 (by Bernard) named in Mr. Baker's 10-12 and 14-15. In this article, "overcoming issues of transparency" is described as a main hurdle, and the solution has nothing at all to do with the **technical hurdle** Mr. Baker cites in his 10, but simply with "don't reveal the underlying holdings of the actively managed ETF, but instead construct a tracking portfolio just like with index-based ETFs" Her again, we have an actively managed portfolio idea and a tracking portfolio idea: replication of actively managed funds was at the time of the invention old and well-known. Index-based ETFs which publish values

Art Unit: 3695

every fifteen seconds are old and well-known. The combination, as the article teaches, is obvious. And again, ETFs are discussed in the WSJ.

Mr. Baker speaks of technology needed, but technology which creates a proxy or hedging or tracking fund for an actively managed investment, the investment being gone which hides the assets under investment, is old and well-known thing, and the technology for valuing the portfolio and publishing the results is also old and well-known. Also clearly, ability to hedge investment in actively managed portfolios is also well-known.

Clearly, what Mr. Baker discusses is not relevant to the claims at hand, and the articles cited actually show the obviousness of the claims.

Examiner notes that Applicants appear to be claiming, by using this 2005 article, an effective date for the invention far after the dates of their continuation-in-part parents.

Applicants arguments have been fully considered and are not persuasive.

10. By 2005, the date of the above article, there was a vast literature on tracking and hedging actively managed hedge funds and hedge fund indexes (see, for example, Kat and Palaro "Hedge Fund Returns: *You Can Make Them Yourself*") and literature on creating proxies by returns analyses using factor models is also old (see for example, Fung and Hsieh, Hedge Fund Benchmarks, A Risk-Based Approach); Dor et al. ("Understanding Mutual Fund and Hedge Fund Styles Using Return Based Style Analysis") date returns-based style analysis ("While it is possible to determine a fund's investment style from a detailed analysis of the securities held by the fund, a simpler approach that uses only the realized fund-returns is possible. Return-based Style

Art Unit: 3695

Analysis, requires only easily obtained information, while Portfolio-based Style Analysis requires knowledge of the actual composition of the portfolio”) to Nobelist William Sharpe’s 1988, 1992 seminal papers. The only issue was regulatory reform, not actually creating the proxy or estimating the value of a fund using a proxy; these were old and well-known.

Applicants arguments have been fully considered and are not persuasive.

11. Mr. Baker (13) cites a 9/26/00 WSJ Europe article (by Hayashi) that again speaks of actively managing ETFs as an extension of mutual funds , cites the huge existing market (48 billion euros) , and that “for index equity, you do have a pretty complete set of tools to work with” and again speaks of the “hurdle” MR. Baker describes as “the transparency problem” which is not one of technology or how to do it, but rather one of **front running**, and old and well-known problem, the solution to which hedge fund managers have had for a long time, namely, not disclosing their trades and holdings, and to which trackers have long held a solution, in tracking portfolios. . Once again, known problem, known solution, combining known things:

'Any fund family that has actively managed mutual funds is a candidate for issuing an actively managed ETF, " said Rainy Shaalan, an analyst at fund tracker Weisenberger, a unit of Thompson Financial" .

Clearly, the article Mr. Baker cites actually shows the obviousness of the claims.

12. Mr. Baker cites Quill et al (May 31, 2000) (16). He misses “What will be the greatest obstacle to the future success of ETFs? Looking just at index-based products, **62% of experts consider regulatory delays to be the greatest obstacle.**

Art Unit: 3695

38% consider ETF profitability to be a substantial hindrance. Finally, these experts expect that there will be an educational challenge that will retard early adoption of ETFs by the broad investing public” which flatly contradicts his repeated thesis that lack of technology is the major hurdle. As for industry demand (Mr. Baker’s 8), Quill writes “When should we expect to see the **first actively managed ETFs**? Not for a while. **31% said that they don't even see the need to create them.** Another 31% said we will have to wait until 2002, while 23% believe it could be as "early" as the second half of 2001. Only one expert thinks it could happen within a year” and “The main selling point for ETFs is their continuous pricing which enables trading at any time. **In reality, both current and potential retail ETF investors rate continuous pricing as the least important feature** that these innovative products have to offer. Twice as many name tax efficiency, tax flexibility and low expense ratios as being the primary reason for their actual or potential purchase decision.

In short, Quill contradicts Mr. Baker's tenets.

Applicants arguments have been fully considered and are not persuasive.

13. Rejections under 35 U.S.C. §112

Applicants point to examples pages 41-46 and figures 7-9. Examiner is precluded from importing limitations from the specification; please refer to MPEP §2111.01 II.

The claims do not specify “substantially the same” and the examples do not amount to guidelines and indeed point out the many different dimensions of measurement: intra-day values, frequency of sampling, frequency of updating of proxy portfolio, holdings overlap, number of holdings.

Applicants arguments have been fully considered and are not persuasive.

14. Rejections under 35 U.S.C. §101

Introduction of the computer in the steps of the method claims does remove the rejections, but another remains.

15. Rejections under 35 U.S.C. §102

Examiner will only treat the arguments relevant to the claims as amended which are now examined, claims 56-59 and 95-97.

Claims 56-59 and claims 95-97 were rejected using the art and rationales used in rejecting claims 1, 2, and 47.

Applicants appear to confuse what the Application overall teaches with what is claimed.

Applicants' first argument pertains to keeping assets secret, a limitation only added with the current amendment, and thus the argument is moot in view of new grounds of rejection.

Applicants' second argument is about "not disclos[ing] using a replicating portfolio to provide information to the market to allow trading of the target portfolio". This limitation is not in the claims at all, so the argument is not relevant.

Applicants then say Dembo's portfolio is not a traded fund. Applicants appear to be confused about their claim; it concerns a traded fund whose value is estimated using a proxy portfolio with similar sensitivity coefficients; Dembo teaches the portfolio.

Dembo's portfolio is indeed traded ("The method then uses the predefined set of available market instruments to identify a set of transactions that will create a

Art Unit: 3695

replicating portfolio that will achieve the maximum risk-adjusted profit... The present invention provides an improved method and apparatus for portfolio replication which seeks to reach an optimal balance between expected profit and the risk involved in attaining that profit. In one embodiment, the present invention identifies a set of transactions required to achieve an optimal hedge by analyzing the portfolio replication according to a stochastic model which takes into account the trade-off between the cost of the hedge and the quality of protection it offers.... The present invention adopts a constructive approach that explicitly specifies the trades that a portfolio manager should undertake to replicate a target portfolio.”). Applicants have a special definition of “fund” which certainly includes such a portfolio: “the term “fund” as used herein includes at least the following): **any type of investment instrument** including, for example, shares of mutual funds, unit investment trusts (UITs), closed-end funds, grantor trusts, hedge funds, any investment company, or any other type of collective investment”. Furthermore, a portfolio whose holding is the fund is also included. Furthermore, Applicants’ specification uses the same word, “portfolio”, in describing the invention; e.g. :” risk exposure calculation may be based on a function of the pricing data for the **AMETF portfolio**” and the “methods shown in Figures 1 and 2 provide measures of intra-day values throughout the trading day without public without public disclosure of the underlying **portfolio**”.

This argument has been fully considered and is not persuasive.

Applicants then argue that Dembo’s replication is not a proxy portfolio. That is obviously untrue. They further argue that Dembo does not teach that the proxy should

Art Unit: 3695

not reveal the holdings of the fund. Applicants have not looked well at the references cited at column 2 lines 54-60 expressly incorporated by reference. The first, "Scenario Optimization", discusses the generalized coordinating or tracking model at pages 5-6, and more examples of tracking models in section 5. For example,

"

Given r_s , $p_s(t)$, $\forall s \in S$;

(*Scenario Subproblem*) Compute x_s satisfying $f(x_s; r_s) \geq 0$, $\forall s \in S$;

(*Tracking Problem*) At time t , compute a policy $x^*(t)$ satisfying

$$v(t) = \underset{x \in X}{\text{Minimize}} \quad \sum_s p_s(t) \|f(x; r_s) - f(x_s; r_s)\|.$$

As was shown earlier, the Tracking Model, $v(t)$, may also be imbedded in an optimal control framework.

The above formulation in principle covers all forms of optimization, linear, nonlinear, discrete as well as systems of equations and inequalities. We could generalize even further. Scenario Optimization could be applied to a "black box", i.e. computer simulation model. All that is needed are the input scenarios and the values of the outputs that need to be tracked."

Applications to portfolios with further constraints, which may obviously include the constraints of unknown assets where only the sensitivity coefficients are matched, are investigated at pages 9-11.

This argument has been fully considered and is not persuasive.

Applicants then argue that Dembo does not teach calculating an estimated value for the traded fund based on the value of the proxy portfolio. Applicants appear not to have read the **claims** in Dembo, and the associated text, including "a portfolio manager controlling a given portfolio (i.e. a target portfolio) has the objective of constructing a replicating portfolio that behaves identically to the target portfolio under

Art Unit: 3695

all possible future states of the world". Clearly the replicating portfolio replicates the value of the target portfolio: "a perfect replication will produce a perfect hedge for the target portfolio...Given a target return distribution, the objective for a portfolio manager is to structure a replicating portfolio that tracks the target return under all possible scenarios."

This argument has been fully considered and is not persuasive.

Thus Dembo does indeed anticipate the claim.

16. Rejections under 35 U.S.C. §103

Regarding Jameson, Applicants appear not to appreciate the generality of the stochastic resource allocation model of ¶ [0062], or the scenario description ¶ [0147] specifying returns and prices **but not** instruments or "revealing the assets", or ¶ [0152]:

[0152] **Some investment institutions need to replicate a portfolio, but cannot obtain the portfolio's individual financial instruments (FIs).** Instead, other FIs are purchased to compose an imitation portfolio (IP) that is expected to perform like the genuine portfolio (GP).

Clearly the assets of the (target) portfolio are not revealed, the (target) portfolio trades, but the performance is replicated by the proxy fund, and also clearly "imitation portfolio" is another phrase for "proxy portfolio". The same argument relates to claim 2, where Examiner suggests another careful reading of the references.

Regarding claim 47, the same argument applies.

This argument has been fully considered and is not persuasive.

17. Since the remaining claims only rely on these three rejections, the alternative ones of claims 1, 2, and 47, Applicants argument regarding the old limitations dealt with

Art Unit: 3695

in the prior Non-Final Office Action as they relate to the current claims have been considered but are not persuasive.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18. Claims 56-59 and 95-97 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims cite

a traded fund whose assets are not publicly disclosed on a daily basis,wherein the proxy portfolio does not reveal the traded fund assets and the identities of the traded fund assets are not disclosed to an investor who trades shares of the traded fund.

“method for ...without publicly disclosing the assets of the traded fund... wherein the proxy portfolio does not reveal the traded fund assets and the identifies of the traded fund assets are not disclosed to an investor who trades shares of the traded fund.

and

Art Unit: 3695

“method for...without publicly disclosing the assets of the exchange traded fund..... the proxy portfolio does not reveal the exchange traded fund assets and the identifies of the exchange traded fund assets are not disclosed to an investor who trades shares of the exchange traded fund.

Applicants are making multiple unclear distinctions between public and investor who trades, between not disclosing, not disclosing daily, and not disclosing at all. Applicants cite at page 1 of current remarks that the support is at page 18 last paragraph and page 19 line 8-page 26 line 17. Those say something *e/se*. The first citation says “the methods shown in Figures 1 and 2 provide measures of intra-day values throughout the trading day without public disclosure of the underlying **portfolio**”. Obviously, that last statement can only be made by someone who knows of what the AMETF portfolio is composed, else they could not say that the proxy composition is different.

19. Examiner can find no support for the *detailed* amendments made, “a traded fund whose assets are not publicly disclosed on a daily basis” and “ the identities of the traded fund assets are not disclosed to an investor who trades shares of the traded fund” and the variations of this wording used in other claims.

20. Claims 56-59 and 95-97 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Steps critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Applicants cite at page 1 of current remarks that the support for the amendments is at page 18 last paragraph and page 19 line 8-page 26 line 17.

Page 19 discusses determining the exposure of the AMETF to risk factors “further detailed below” to produce sensitivity coefficients and creating a proxy portfolio having substantially the same exposure to the same set of risk factors (“or close to it”) but with a generally different set of securities in different proportions than those in the actual AMETF portfolio. Later, risk factor time series are calculated “from historical data...for example, based on daily, weekly, or monthly reports.....risk exposure calculation may be based on **a function of the pricing data for the AMETF portfolio rather than unmodified historical pricing data**”. Then a linear regression over the N historical price data points is described, and then regression expressing the risk factors in terms of the proxy universe to produce the weightings. At page 26 lines 5-6, they cite the proxy used to publish an intra-day value for the AMETF throughout the day.

At no time do Applicants address the question of how risk factor series from at best daily reports can yield a model “substantially” matching every ten minutes (see in this regard somewhat relevant discussion at pages 31-35 of Applicants’ reference Connor et al (“use of daily data causes some problems...non-synchronicity...”).

Also, Examiner notes that the secrecy limitation is virtually impossible. Consider an extreme situation in which, during a measurement period, all investments except for one do not change at all, and the one exception rises. If the fund and its proxy both rise by the same amount, as the system is designed to cause, it can only be that fund and the proxy have the one investment which is the only one to have risen during that

Art Unit: 3695

period. So the proxy MUST under certain circumstances reveal the target fund, no matter how the proxy is derived.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

21. Claim 56-59 and 95-97 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 56 uses "the fund" (as in "exposure of the fund") without a proper antecedent; if "said traded fund" is meant, that should be used.

Claim 56 says determining "a set of risk factors;" and "a set of traded fund sensitivity coefficients" and subsequently refers to "storing the set of fund sensitivity coefficients" "one of the risk factors". If " storing the set of traded fund sensitivity coefficients" and "one risk factor in the said set of risk factors" is meant, that should be made clear. Similar comments apply to claims "one of the risk factors" in claims 57, 59, 95, and 97. Examiner recalls that use of proper antecedents was mentioned during the interview and a careful review of the language of the claims was suggested.

Claim 56 also uses "a traded fund whose assets" and subsequently refers to "the traded fund assets" . It is not clear whether the same thing is meant by the two phrases. For example, there is a difference between "the assets of traded fund" which can mean all of the assets of the fund and the "the traded fund assets"; which could mean only

Art Unit: 3695

those assets which are traded (in the case of a fund holding long-term investments and short-term ones, clarifying and using the difference might be necessary to an invention).

Claim 56 cites 'determining a set of **traded fund** sensitivity coefficients and **storing** the **fund** sensitivity coefficients [are we determining one thing and storing something else, that something else having no antecedent?]....[followed by]...**storing** the **traded fund** sensitivity coefficients [so are the same thing stored twice {why?} or is the first set stored a set of coefficients different from the **traded fund** sensitivity coefficients and, if so, from where do they come?].

Similarly, claim 57 also uses "assets of the traded fund" and "traded fund assets". It is again not clear whether the same thing is meant by the two phrases.

Claims 96-97 dependent on claim 95 refer to "estimated value for the fund" and "the fund" whereas claim 95 discusses an "exchange traded fund". Once again, there is no proper antecedent for "the fund" as used in the dependent claims.

Claim 96 cites "disseminating the estimated value for the fund..." It is not clear who or what is disseminating it to whom or what, and by what means or channel, or whether it is merely output by a GUI.

Claim 97 still uses "substantially the same", rejected in the prior Non-Final Office Action. The claims do not specify "substantially the same" and the examples do not amount to guidelines and indeed point out the many different dimensions of measurement: intra-day values, frequency of sampling, frequency of updating of proxy portfolio, holdings overlap, number of holdings. Page 20 cites "an acceptably small difference". The extent of "substantially the same" is not clear.

Art Unit: 3695

All the independent claims cite that identities ...are not disclosed to an investor who trades shares of the traded fund. However, a share structure has not been heretofore revealed at all. There is nothing *in the claim* which says the fund has shares, before it is assumed that there are shares to trade.

For **all** these reasons, the meaning and scope of all the claims are thus unclear.

Claim Rejections - 35 USC § 101

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

22. Claim 56 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 56 is to a traded fund whose assets are not publicly disclosed on a daily basis. A fund does not lie within one of the statutory categories.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

Art Unit: 3695

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

23. Claims 56 and 95 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 13, 20, and 23 of U.S. Patent No. 6941280. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with calculating a value proxy for a fund wherein the fund's security positions are secret.

24. Claims 56 and 95 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 8, 15, and 20 of U.S. Patent No. 7099838. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with producing a proxy for a fund having the same sensitivities wherein the fund's securities are unknown.

25. Claim 56 and 95 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 21, 30, 39, and 44 of copending Application No. 09815589. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with

Art Unit: 3695

tracking a fund using another set of securities which does not reveal the assets of the fund.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

26. Claims 56 and 95 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7305362.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with calculating the value of a fund of unknown composition based on sensitivity factor information.

27. Claims 56 and 95 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 16 of U.S. Patent No.

7571130. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with generating a set of securities as a portfolio having the same sensitivities to factors of and tracking another fund where the fund assets are not revealed and the portfolio does not reveal the fund assets.

28. Claims 56 and 95 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 8, and 10 of copending

Application No. 12198003. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with generating a proxy

Art Unit: 3695

portfolio for a fund having the same sensitivity coefficients, the proxy portfolio not revealing the fund's assets.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

29. Regarding claims 56 -59, Examiner has assumed a “traded fund” means a fund as described by Applicants as any type of investment instrument and is guided by Applicants’ specification which says (page 12)

“The invention provides systems and methods that allow trading of any fund while maintaining secrecy of the specific assets of the fund. While much of the following description is in terms of AMETFs, the funds traded using the systems and methods of the invention can include (and the term "fund" as used herein includes at least the following): **any type of investment instrument** including, for example, shares of mutual funds, unit investment trusts (UITs), closed-end funds, grantor trusts, hedge funds, any investment company, or any other type of collective investment. Furthermore, while the examples provided herein demonstrate intra-day trading of fund shares on a stock exchange without disclosure of fund assets, the systems and methods of the invention are equally applicable to trading of secret-asset fund shares at any time on any venue, market, or exchange, for example, after-hours trading on a U.S.

Art Unit: 3695

or foreign exchange, or on an electronic trading network (ECN) or over-the-counter, third market, or other off-exchange trading venue”.

30. Regarding claim 95-97, Examiner notes that the “exchange traded fund” mentioned can be interpreted to be a fund traded on an exchange, rather than the specific entity “ETF” as used in the literature at the time of the invention, and is further so guided by Applicants’ specification at pages 12-13

“The invention provides structures for creating and redeeming AMETF shares that allow arbitrage, methods for publishing an intra-day asset value that can be used by investors to base negotiated prices, and portfolios that can be used by market liquidity providers and others to hedge risks from trading AMETF shares. The information provided by the invention need not include specific information about the specific fund holdings or information sufficient even to determine approximate fund holdings. Instead, the information should be sufficient to create 20 portfolios that mimic the behavior of AMETFs accurately enough to base negotiated prices of the AMETFs on and to hedge AMETF investment risks.

In accordance with the invention, AMETFs may be organized as investment companies (or fund companies), which are companies that issue securities and whose primary business is investment. In a preferred embodiment, AMETFs may be open-ended, and thus issue shares that 25 may be redeemed by the investment company for their NAV. While AMFs [sic] are currently not traded on secondary markets, the structures, systems, and methods described below can allow exchange trading. While most ETFs are open-end management investment companies, some ETFs are organized as UITs, and a similar organizational structure may be used for AMETFs. In an alternative embodiment, AMETFs may be organized as closed-end companies, which issue shares that are not redeemable by the fund company at all times, but rather are traded primarily on secondary markets. There are a number of ways in which the distribution structure of AMETF shares may be organized.

31. A careful examination of the current claims reveal that the [exchange] traded fund assets are not disclosed to an investor who trades shares of the fund, and those assets are not publicly disclosed or publicly disclosed on a daily basis. That merely describes a type of fund, e.g, an “alternative investment” fund. Second, there is a proxy portfolio having substantially the same sensitivity coefficients, and which does not

Art Unit: 3695

reveal the fund assets. Nowhere is it said that the entity creating the proxy portfolio does not know the composition of the “target” fund, and indeed the specification clearly implies the opposite, that the creator of the proxy portfolio does know all of the assets and trades of the underlying portfolio “without public disclosure of the underlying **portfolio**”. So the claims only require that the fund have assets unknown over some period (depending which particular claim is being addressed). That the proxy does not reveal the traded fund assets is a redundant limitation, as it is already known and subsumed in the broader statement already made that the fund’s assets are not publicly disclosed or publicly disclosed on a daily basis. And, as noted above, it is impossible.

32. Regarding the risk factor model, Applicants have admitted that it is prior art, and cites numerous prior references:

“Figure 4 is a specific embodiment of the method depicted generally in Figure 3, and involves an economic factor model. The method of figure 4 involves selection of a group of predetermined economic risk factors 405. Analysis of investment risk through economic risk factors is a well studied art, and has produced many different successful pricing models ...APT...Berry et al., ..1988....Fama et al....1993...” etc.

33. Claim 56 is rejected under 35 U.S.C. 102(b) as being anticipated by Dembo (5799287, reference A4 on IDS of 4/25/2008).

Regarding claim 56, Dembo teaches a traded fund (where Applicants’ specification’s definition of “fund” and Applicants’ own usage of “portfolio’ are used – Dembo: “The method then uses the predefined set of available market instruments to

Art Unit: 3695

identify a set of transactions that will create a replicating portfolio that will achieve the maximum risk-adjusted profit... The present invention provides an improved method and apparatus for portfolio replication which seeks to reach an optimal balance between expected profit and the risk involved in attaining that profit. In one embodiment, the present invention identifies a set of transactions required to achieve an optimal hedge by analyzing the portfolio replication according to a stochastic model which takes into account the trade-off between the cost of the hedge and the quality of protection it offers.... The present invention adopts a constructive approach that explicitly specifies the trades that a portfolio manager should undertake to replicate a target portfolio.”:

Applicants have a special definition of “fund” which certainly includes such a portfolio:

“the term “fund” as used herein includes at least the following): **any type of investment instrument** including, for example, shares of mutual funds, unit investment trusts

(UITs), closed-end funds, grantor trusts, hedge funds, any investment company, or any other type of collective investment”. Furthermore, a portfolio whose holding is the fund

is also included. Furthermore, the specification uses the same word, “portfolio”, in

describing the invention; e.g. :” risk exposure calculation may be based on a function of

the pricing data for the **AMETF portfolio**” and the “methods shown in Figures 1 and 2

provide measures of intra-day values throughout the trading day without public without

public disclosure of the underlying **portfolio**”) *whose assets are not publicly disclosed*

on a daily basis (see at least references cited at column 2 lines 54-60, in all their

generality, as referred to in item 15 above, expressly incorporated by reference),

wherein an estimated value of the fund is calculated (see at least **claim 7**) *by:*

Art Unit: 3695

*determining a set of risk factors from a risk factor model (see at least **column 5 lines 18-26**), determining a set of traded fund sensitivity coefficients (see at least **column 5 lines 7-38, column 7 lines 23-25, Figure 1, claims 1(c), 6, 7, 11-12**) and storing the set of fund sensitivity coefficients on computer readable media (see at least **column 5 lines 8-10, column 7 lines 3-67, claims 1-12**), wherein each traded fund sensitivity coefficient specifies the exposure of the fund to one of the risk factors (see at least **column 5 lines 7-38, column 7 lines 23-25, Figure 1, claims 1(c), 6, 7, 11-12**); storing the traded fund sensitivity coefficients on computer readable media (see at least **column 5 lines 8-10, column 7 lines 3-67, claims 1-12**);*

*using a computer to create a proxy portfolio having substantially the same sensitivity coefficients as the traded fund (see at least **column 2 line 44 – column 5 line 26, especially column 3 lines 37-44, Figure 1, claim 11** "a portfolio manager controlling a given portfolio (i.e. a target portfolio) has the objective of constructing a replicating portfolio that behaves identically to the target portfolio under all possible future states of the world"; "a perfect replication will produce a perfect hedge for the target portfolio"; **column 4 lines 38-42**, "Given a target return distribution, the objective for a portfolio manager is to structure a replicating portfolio that tracks the target return (or any other attribute, such as volatility) under all possible scenarios"); and calculating the estimated value of the traded fund based on the value of the proxy portfolio (see at least **column 32 lines 60-63, column 3 lines 5-11, column 5 lines 29-32**), wherein the proxy portfolio does not reveal the traded fund assets and the identities of the traded fund assets are not disclosed to an investor who trades shares of the traded fund (see at*

Art Unit: 3695

least “ Given a target return distribution, the objective for a portfolio manager is to structure a replicating portfolio that tracks the target return (or any other attribute, such as volatility) under all possible scenarios” where it is clear that only the target return or other attribute is known and the possible scenarios clearly include known sensitivities and unknown identities of assets to all investors and members of the public. That no knowledge of the target's holdings are ever stated or used in the reference's method makes clear that this negatively stated limitation is met).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

34. Items 23-26 above also apply here.

35. Claim 56 is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Connor et al. (Reference C2 on 4/3/2006 IDS, hereinafter Connor), and further in view of Jameson (US 20040059621), and further in view of Dembo (5799287, reference A4 on IDS of 4/25/2008).

Regarding claim 56, Connor teaches a *traded fund whose assets are not publicly disclosed on a daily basis* (the document is based on APT's assumption that

Art Unit: 3695

asset returns follow a factor model, where (page 5) co-movements are caused by economy-wide shocks; no knowledge of particular securities by the public is stated),

*determining a set of risk factors from a risk factor model (see at least **pages 59-60**); determining a set of traded fund sensitivity coefficients (see at least **pages 2-3, 27-28, 60-61**) and wherein each traded fund sensitivity coefficient specifies the exposure of the fund to one of the risk factors (see at least **pages 2-3, 24-28, 60-61, 69-70**; note also that as argued above, Applicants' specification cites numerous references to indicate that this material is old and well-known, see at least Applicants' specification at **pages 21-22**); create a proxy portfolio having substantially the same sensitivity coefficients as the traded fund (see at least **pages 29-30, 35-37**);*

In addition, Jameson teaches a traded fund whose assets are not publicly disclosed on a daily basis , and the identities of the traded fund assets are not disclosed to an investor who trades shares of the traded fund; wherein the proxy portfolio does not reveal the traded fund assets (see at least ¶ [0152] "Some investment institutions need to replicate a portfolio, but cannot obtain the portfolio's individual financial instruments (FIs). Instead, other FIs are purchased to compose an imitation portfolio (IP) that is expected to perform like the genuine portfolio (GP)" , [0062]-[0068]: "As is standard in stochastic programming, resources in this invention are allocated in one or more stages, and, between stages, what were previously uncertain values either become known, or the uncertainty of their eventual values reduced. Allocations made in one stage affect what can be accomplished in subsequent stages. Mathematically, the general stochastic resource

Art Unit: 3695

allocation model addressed here is: 1 maximize $z = \sum_i p_i f(a_i, WS_i)$ (2.0 where, $WS_{sub.i}$ is a matrix containing all the random-variable realizations for scenario i $a_{sub.1}$ is a vector containing first-stage allocations function. f is a function that evaluates first-stage allocations $a_{sub.1}$ against scenario i $p_{sub.i}$ is the probability of scenario i Implicit within function f is the generation of $a_{sub.2}$, $a_{sub.3}$, . . . allocations for the second, third, and so-forth stages. Also f is an evaluation of such allocations. (Obviously, the maximizing orientation used here could have just as easily have been reversed);[0147]-[0156]" ... After the scenarios are created and loaded into the scenario-tree and $wScenario$ objects, the NativeOptimizer function allocates cash to the FIs that can be used in the IP, such that the return of the IP equals the return of the GP contained in the $wScenario$ object. It is likely that multiple allocations can yield the same return, and so a random process selects one such allocation" clearly if the allocation is randomly chosen, there can be no information transmitted by the proxy portfolio about the target, which also was unknown at the beginning of the process).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the fund as taught by Connor the lack of information about assets as taught by Jameson to realize the claimed invention since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Art Unit: 3695

(Please see KSR [127 S Ct. at 1739] "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results" and MPEP §2141 III (A)).

Neither Connor nor Jameson teaches the computer structure and estimating the value of the traded fund.

Dembo teaches *storing the set of fund sensitivity coefficients on computer readable media, storing the traded fund sensitivity coefficients on computer readable media* (see at least **column 7 lines 31-41**). *using a computer to [create a proxy portfolio] fund* (see at least **column 7 lines 23-38**), *and (wherein an estimated value of the fund is calculated); calculating the estimated value of the traded fund based on the value of the proxy portfolio* (see at least the **claims, column 4 lines 7-10 and 50-53, column 5 lines 8-column 6 line 18, column 7 lines 63-65, column 8 lines 8-11 and 43-53, column 10 lines 3-10**, trading to generate the replicating portfolio gives a list of securities now in the replicating portfolio: **column 12 lines 53-57**, and we have the securities' values **column 13 lines 20-21 and 40-47...column 16 lines 6-9**, the minimum regret replicating portfolio has a price produced by this method which may be used as a hedge –and obviously the price produced of the replicating portfolio implicitly has the meaning of being the price of what it is replicating **column 18 lines 16-20**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the fund as taught by the combination of Connor and Jameson computer functions and price estimation as taught by Dembo to realize the claimed invention since the claimed invention is merely a combination of old elements, and in

Art Unit: 3695

the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable

36. Claim 56 is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe, and further in view of Business Week, and further in view of NYT.

Regarding claim 56, Sharpe teaches a risk model consisting of exposure to 12 asset classes and determining the exposures from multiple regression of a fund's returns "a method using only returns" which Sharpe contrasts with "detailed analysis of securities held by the fund", showing that the knowledge of the securities is not needed for his method.

It would have been obvious to one of skill in the art at the time of the invention, given Business Week's description of an ETF product to be "a clone of actively managed mutual funds " and "exchange-traded funds' minute-by-minute fluctuations are on the ticker" (page 2) and NYT's description of the need (last full paragraph on page 2 and the problem and the legal hurdles to be overcome on pages 2-3), to apply Sharpe's well-known methods of style analysis (see at least Figures 3-13 and 18 and the proxy effectively created by equations 4-6) to arrive at how to make a proxy portfolio that emulates the desired performance and which can be used to arrive at a value estimate. Use of a computer system as the claim cites would likewise have been obvious to one of skill in the art. Examiner submits that one of skill in the art would have

Art Unit: 3695

known at the time of the invention of the work of Agarwal, Naik, Fung, Hsieh, Schneeweis, Spurgin, and Jaeger applying Sharpe's methods of style analysis to replicate hedge funds and other alternative investments, where the constraint is also that the public does not know on a daily basis the holdings of the alternative investment fund, and the replications give no information to the fund trader on the traded fund assets.

37. Claims 57, 59, 95 and 97 are rejected under 35 U.S.C. 102(b) as being anticipated by Dembo (5799287, reference A4 on IDS of 4/25/2008), and further in view of Gibbons and Ferson, 1984, (hereinafter Gibbons), or are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Connor et al. (Reference C2 on 4/3/2006 IDS, hereinafter Connor), and further in view of Jameson (US 20040059621), and further in view of Dembo (5799287, reference A4 on IDS of 4/25/2008), and further in view of Gibbons and Ferson 1984, (hereinafter Gibbons), or are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe, and further in view of Business Week, and further in view of NYT, and further in view of Gibbons and Ferson, 1984, (hereinafter Gibbons).

As already seen the Applicants' specification teaches that the risk factor model and sensitivity analysis is old and well-known, and provides multiple references. The

Art Unit: 3695

methods in the references of using only sensitivity coefficients do not involve knowing the assets of the traded fund. The difference between the steps of claim 57 and those of claim 56 is merely the calculation of weights as part of creating the proxy portfolio, where use of the computer has been dealt with in the claim 56 rejections..

Gibbons traces the use of factor analysis to make up a portfolio (page 2-3) with an unobservable target (page 6, 17), and makes explicit how Sharpe's analysis can be used to create a proxy portfolio using weights derived from the regression, when the target portfolio is not known.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the method as taught by either Dembo or the combination of {Connor, Jameson, and Dembo} or of {Sharpe, Business Week and NYT} the weight calculation as taught by Gibbons to realize the claimed invention since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 59, 95 and 97, they are rejected using the same art and rationales used to reject claims 56 and 57.

38. Claims 58 and 96 are rejected under 35 U.S.C. 102(b) as being anticipated by Dembo (5799287, reference A4 on IDS of 4/25/2008), and further in view of Gibbons and Ferson, (hereinafter Gibbons), and further in view of Official Notice.

or is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Connor et al. (Reference C2 on 4/3/2006 IDS, hereinafter Connor), and further in view of Jameson (US 20040059621), and further in view of Dembo (5799287, reference A4 on IDS of 4/25/2008), and further in view of Gibbons and Ferson (hereinafter Gibbons), and further in view of Official Notice,

or is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe, and further in view of Business Week, and further in view of NYT, and further in view of Gibbons and Ferson (hereinafter Gibbons), and further in view of Official Notice.

Regarding claim 58, Official Notice is taken that disseminating a value for a fund's estimated value during the day is old and well-known.

Regarding claim 96, it is rejected using the same art and rationales used to reject claim 58

Conclusion

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDA PERRY whose telephone number is (571)270-1466. The Examiner can normally be reached on M-F 8-5 alternate Fridays.

40. If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Charles Kyle, can be reached on 571 272 6746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3695

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Linda Perry/
Linda Perry
Examiner, Art Unit 3695

31 July 2009

/Charles R. Kyle/
Supervisory Patent Examiner, Art Unit 3695